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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,492

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Shinji Furusho

YOSHID0019

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EXAMINER

SOMERS, MARC S

ART UNIT

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2159

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,492	Applicant(s) FURUSHO, SHINJI	
	Examiner MARC SOMERS	Art Unit 2159	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendments to the claims were received on 7/6/2009. Claims 1-28 are pending where claims 1-28 were previously presented.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/6/2009 has been entered.

35 USC § 112

3. The rejection of claim 7 has been withdrawn in light of the amendment to claim 7 indicating which value list is being used by the claim.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 4-8 and 12-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2159

6. Claims 5-8 and 15-26 recite various aggregating, sorting, joining, and retrieving methods that use either the second pointer array or the second value list as recited in claims 1-4. However, it is unclear from the language in these claims whether the "second pointer array, or the second value list, or the second pointer array and the second value list" created by the data processing method according to claims 1-4, as appropriate, requires the array to be created according to the respective method as recited in claims 1-4 as appropriate, or if any array data structure that matches the second array's or second value list's data structure as recited in claims 1-4 as appropriate will suffice. For purposes of compact prosecution, the Examiner has construed that claims 5-8 and 15-26 requires the methods of claims 1-4 to be executed first in order to create the "second pointer array, or the second value list, or the second pointer array and the second value list".

7. With regard to claims 4, 12-14, 27, and 28, these claims recite the limitation "wherein, as a result of the comparison, when size of the ordered set array is small than the size of the first value list at a predetermined rate, then steps (c) and (d) are performed" in the body of claims that fails to further limit the claim. Claims 4, 12-14, 27, and 28 are dependent on independent claims 1, 3, 9, and 11, where each independent claim states that the method performs the steps of (c) and (d). However, claims 4, 12-14, 27, and 28 broaden the claim invention by stating that a comparison is made that where the result of the comparison determines whether steps (c) and (d) should be executed. The dependent claims broaden the scope of the claimed invention which causes these claims to fail to particularly point out and distinctly claim the invention

Art Unit: 2159

since the independent claims require the execution of steps (c) and (d) while the respective dependent claims now make steps (c) and (d) optional.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinji Furusho in JP2000339390 (hereafter referred to as the “Kosho document” or “Kosho”; the inventor is indicated to be Kosho Shinji; however, the affidavit filed on 7/6/2009 indicates otherwise), as provided by the Applicant (an Examiner-obtained translation of the publication is being used for the rejection) in view of Shinji Furusho in US Patent 6,721,751 (supplied in IDS; affidavit filed 7/6/2009 indicates that this reference has the same teachings as the Kosho document since they are the same application).

10. With regard to claim 1, Kosho and Furusho disclose a data processing method for extracting a subset as a processing object from a tabular format data expressed as an array of records each including an item and an item value belonging to the item (see Kosho and Furusho, the Abstract), comprising:

a) constructing the tabular format data by creating information blocks corresponding to respective items, each information block including a first value list in which the item values are stored in order of item value numbers corresponding to the

Art Unit: 2159

item values and a first pointer array in which pointer values indicating the item value numbers are stored in order of unique record numbers (see Kosho, Abstract and see paragraph [0005]; see Furusho, abstract and col 2, lines 4-11);

b) creating an ordered set array containing record numbers of records selected from the array of the records, wherein the selected record numbers are arranged in a specified order in the ordered set array (see Kosho, paragraphs [0005] and [0012]; a sorting array or ordered set array is created/generated where the array contains records from the array of records or tabular format data; see Furusho, col 4, lines 15-20' the count array is used as an array that is ordered or arranged in a specified order based on the field values);

c) arranging a pointer value in the first pointer array at a position indicated by each of the record numbers of the ordered set array into an item value number array at a position corresponding to a position where the record number is arranged in the ordered set array (see Kosho, paragraphs [0005], [0006], [0012], and [0013]; an item value number array or position direction array is used where the contents of the array are sorted/organized based on the ordered set array or sorting array; see Furusho, col 4, lines 20-23; the pointer values or item values for the record numbers are arranged into a position indicating array at a position corresponding to the count array or ordered set array);

11. Kosho and Furusho teach and d) creating a second value list storing value elements contained in the item value number array and a second pointer array storing position elements indicating elements in the second value list corresponding to the

Art Unit: 2159

record numbers by referring to the item value number array (see Kosho, paragraphs [0008] and [0009]; the selected subset of data have an information block that refers to the subset via a second pointer array and its respective value list, i.e. the second value list; see Furusho, col 2, line 47 through col 3, line 31 and col 4, lines 33-48; a second value list and second pointer array are created where the values of the second value list and second pointer array are sorted according to a pointer array associated with the information block), but do not explicitly teach that the values in the second value list and the second pointer array are stored corresponding to the positions indicated in the item value number array. Kosho and Furusho indicate the values are stored or sorted based on a pointer array but do not explicitly indicate which pointer array is used to sort or order the second value list and the second pointer array. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the pointer array used to sort/order the second value list and the second pointer array as taught by Kosho and Furusho so that the position indicating array (also known as the item value number array) for the information block is used to sort/order the values of the second value list and the second pointer array appropriately.

12. Kosho and Furusho further teach wherein a value in the first value list is specified from a record number of the ordered set array through an element in the second pointer array at a position indicted by the record number and an element in the second value list at a position indicated by the element in the second pointer array (see Kosho, paragraphs [0008], [0009], [0010], and [0011]; see Furusho, col 2, line 47 through col 4, line 14; the sub tabular data in the information block is the selected/specified data from

Art Unit: 2159

the tabular format data where the information block refers to the data in a first value list via a second pointer array based on the position/number of the record and also the data in the first value list is referred to by the second value list of the information block based on the sorted positions of the records in a similar manner as sorted in the second pointer array).

13. Claim 3 is substantially similar to claim 1 and is thereby rejected for the same reasons as claim 1 above.

14. Claims 9 and 11 are directed to data processing programs (see Kosho, paragraph [0019]) and are substantially similar to claims 1 and 3 above. As such, claims 9 and 11 are rejected for the same reasons noted above.

15. With regard to claims 2 and 10, Kosho and Furusho disclose sorting the elements in the item value number array, creating a third array in a state when a duplicate value is excluded, and substituting the created third array for the second value list; and creating the second pointer array by converting the elements in the item value number array to reflect the sort of the elements in the item value number array and the exclusion of the duplicate value (see Kosho, paragraphs [0012], [0014], [0015], and [0016]; see Furusho, col 4, lines 15-32, line 49 through col 6, line 21; overlapping or duplicate values are found and removed/excluded so that the value list or third array maintains the integrity of the information block by keeping track of the various distinct

Art Unit: 2159

values of the information block while using a new/modified pointer array that is sorted based on the original sort order).

16. With regard to claims 4, 12-14, 27, and 28, Kosho and Furusho disclose comparing a size of the ordered set array with a size of the first value list, wherein, as a result of the comparison when size of the array is smaller than the size of the first value list at a predetermined rate, then steps (c) and (d) are performed (see Kosho, paragraphs [0009], [0010], [0011], and [0017]; see Furusho, col 3, line 14 through col 4, line 14 and col 6, lines 22-57; when the selected items from the first value list are selected and sorted then the system creates an information block corresponding to the subset of data based on the steps (c) and (d) as discussed above with regard to the independent claims).

17. With regard to claims 5 and 15-17, Kosho and Furusho disclose specifying an element indicating an item value as a retrieval object among elements in the second value list; arraying a value indicating that a flag is on at a position corresponding to a position of a specified element in a flag array having the same size as the second value list; specifying an element of the second pointer array indicated by a record number in the ordered set; referring to a state of a flag at a position indicated by an element of the second pointer array in the flag array; and successively arranging the record number into a newly provided ordered set array for output in a case where the state of the flag is on (see Kosho, paragraphs [0022]-[0025] and Furusho, col 10, lines 55 through col 12,

Art Unit: 2159

line 26; the item values to be searched/retrieved are specified in the value list and pointer list and the corresponding position in a flag array is set; the results or result set is provided as output).

18. With regard to claims 6 and 18-20, Kosho and Furusho disclose creating a classification array in which a classification number indicating a category of a value is arranged correspondingly to an element of the second value list; specifying a record number in the ordered set array corresponding to the specified classification number; and performing aggregation using a predetermined value list item value indicated by the specified record number (see Kosho, paragraphs [0023]-[0025] and Furusho, col 11, line 25 through col 12, line 26; a classification array is used and the values of the array correspond to the values of the value lists where the specified record numbers are gathered/aggregated).

19. With regard to claims 7 and 21-23, Kosho and Furusho disclose calculating an existence number as the number of elements indicated by the second pointer array for each value of the second value list; creating, based on the existence number, a cumulative number array corresponding to a value of the second value list and indicating a head position at which a record number in the ordered set array is to be arranged; and referring to the cumulative array and arranging a record number of the ordered set array into an array for output so that a sort order of the item values in the value list is reflected (see Kosho, presence number, paragraphs [0023]-[0027] and

Art Unit: 2159

Furusho, col 11, line 25 through col 13, line 3; the presence or existence of elements/records is calculated and a number array is arranged with a head/start position and is used as a result set or output).

20. With regard to claims 8 and 24-26, Kosho and Furusho disclose finding an item to be shared in each of the plural tabular format data; equating item values in the second value list of the information block relating to the item; and in response to equating the item values, updating an element in the second pointer array in each of the information blocks in accordance with a change in arrangement of the item values (paragraphs [0012] and [0023]-[0027] and Furusho, col 11, line 25 through col 13, line 3; items/records are searched and found where the items/records are found to be equivalent/equated and then they are joined and ordered/sorted according to the sorting order of the items/records).

Response to Arguments

21. Applicant's arguments (see the last three paragraphs on page 18) with respect to the 35 USC 112, second paragraph rejection of claim 7 have been fully considered and are persuasive. The 35 USC 112, rejection of claim 7 has been withdrawn. The rejection of claim 7 has been withdrawn in light of the amendment to claim 7 indicating which value list is being used by the claim.

Affidavit/Declaration Under 37 C.F.R. 1.132

22. The declaration under 37 CFR 1.132 filed 7/6/2009 is insufficient to overcome the rejection of claims 1-28 based upon the teachings of the Shinji Document (JP 2000-339390) under 35 USC 102(b) as set forth in the last Office action because: the declaration refers only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

23. Applicant's arguments (see the first paragraph on page 19 through the last paragraph on page 23) have been fully considered but they are not persuasive. The applicant summarizes the teachings of the Shinji Document (JP 2000-339390) on pages 19 and 20 and then discusses what features the applicant believes the Shinji document does not teach at the last paragraph on page 20 through the last paragraph on page 21. This characterization of the Shinji document is supported by the 37 CFR 1.132 Declaration filed on 7/6/2009. The applicant then contends that the Shinji document does not teach steps (b), (c), and (d) of the independent claims because the inventor in the 37 CFR 1.132 Declaration (hereinafter the Furusho declaration) said that steps (b), (c), and (d) are not taught by the Shinji document. The Examiner respectfully disagrees.

Art Unit: 2159

24. The Examiner would like to point out that the rejection of the claims has been changed to a 35 USC 103(a) rejection. Although, the rejection cites both the Shinji document (also known as the Kosho document) and the Furusho patent (US 6,721,751), the 35 USC 103(a) rejection was made based on a feature that is not explicitly taught by the Shinji document. Therefore, the 35 USC 103(a) rejection should be treated as a single reference 35 USC 103(a) rejection because the Furusho declaration has stated that these references disclose the same invention and are apart of the same patent family. The applicant has repeatedly cited the Furusho patent when discussing what the Shinji document disclosed therefore the Examiner has mapped the claims to the Furusho document since the Furusho document is an English translation of the Shinji document according to the Furusho declaration.

25. With regard to the teachings of the Shinji document, the Furusho declaration has stated that steps (b), (c), and (d) are not taught. However, the conclusion made by the Furusho declaration merely states that the claim limitations were not taught without providing factually supported evidence indicating how the Shinji document does not teach the claimed limitations. As shown above in the 35 USC 103(a) rejection, the Examiner has indicated that the Shinji document (and by extension the Furusho patent) teaches the claimed limitations. It may be that a particular application as recited in the applicant's disclosure is not taught by the Shinji document or by the Furusho patent; however, those features do not appear to be recited in the claims. Furthermore, the Examiner notes that arguments of counsel cannot take the place of factually supported

Art Unit: 2159

objective evidence and that the claims are given their broadest reasonable interpretation. See MPEP 2111 and 2145.

26. The main argument supplied by the applicant appears to be in the second to last paragraph on page 21 which states that the Shinji document does not teach steps (b), (c), and (d) as discussed in the Furusho declaration because the embodiments of the claimed invention efficiently handles a small subset from a very large tabular format data. This efficiency relates to the size of the value list being shrunk when the second value list is generated. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a shrunk or smaller second value list) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC SOMERS whose telephone number is (571)270-3567. The examiner can normally be reached on 9 am - 5 pm EST Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trujillo can be reached on (571) 272-3677. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2159

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. S./
Examiner, Art Unit 2159
MS
9/9/2009

/James Trujillo/
Supervisory Patent Examiner, Art
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